Section 21
Guidelines for Alternate Plans

This section provides guidelines for developing alternate plans for forest practices activities that vary from the forest practices regulations. Alternate plans can be used as a tool to deal with a variety of situations, including where the cumulative impacts of regulations disproportionately impact a landowner or where minor on-the-ground modifications will result in significant operation efficiencies. The alternate planning process must result in a plan that provides protection to public resources at least equal in overall effectiveness as provided by the forest practices act and rules while seeking to minimize constraints to the management of the affected lands.

The legislature has found in RCW 76.13.100(2) that small forest landowners should also have the option of alternate management plans. These alternate plans are intended to provide flexibility to small forest landowners that will still provide protection of riparian functions based on specific field conditions or stream conditions on the landowner's property.

PART 1. Alternate Plans

PART 2. Alternate Plan Templates for Small Forest Landowners

Template 1. Small Forest Landowner Western Washington Thinning Strategies for Overstocked Conifer- Dominated Riparian Management Zones

PART 1. ALTERNATE PLANS

INTRODUCTION

All forest practice operations must comply with both the forest practices act and the associated rules. The Department of Natural Resources (DNR), however, has the authority to approve an alternate plan that provides protection to public resources at least equal in overall effectiveness as provided by the forest practices act and associated rules (WAC 222-12-040).

ALTERNATE PLAN CONTENT

Alternate plans may support a single forest practices application or multiple applications if the sites included in the plan have sufficient common physical characteristics and elements to justify being considered together. A landowner may apply for a multiyear permit (2-5 year) to perform an approved alternate plan. Alternate plans must contain all of the following as listed in WAC 222-12-0401(3):

(a) A map of the area covered, at a scale acceptable to the department showing the location of any affected streams and other waters, wetlands, unstable slopes, and existing roads. The map must also show the location of proposed road construction, timber harvest, and other forest practices;

(b) A description of how the alternate plan provides public resource protection to meet the approval standard, including a description of the proposed alternate management strategy, prescriptions, and where applicable, aquatic resource enhancements;

(c) A list of the forest practices rules that the alternate management plan is intended to replace;

(d) Where applicable, descriptions of monitoring and adaptive management strategies, including landowner plans for annual performance reviews;

(e) Where applicable, descriptions of an implementation schedule; and

(f) When multiple forest practices applications are submitted with the same alternate plan or when an alternate plan has been used for previous applications, justification that the sites included in the plan share sufficient common physical characteristics and elements to be considered together.

SMALL FOREST LANDOWNER ALTERNATE PLAN STRATEGIES AND TEMPLATES

The purpose of this section is to provide guidelines for small forest landowner alternate plans. Small forest landowners who follow these guidelines will create a plan meeting site-specific conditions in a low-impact timber harvest while addressing the resource objectives. Templates for small forest landowners are provided to address common small landowner management strategies for alternate plans.

A landowner who chooses to develop an alternate plan is responsible for preparing and submitting the plan, for DNR approval, as part of a forest practices application. The DNR Small Forest Landowner Office (SFLO) is available to small landowners to provide technical assistance in the development of an individualized alternate plan. The SFLO is also available to facilitate the landowner's interactions with the department, other state agencies, federal agencies, and/or affected Indian tribes that may review the small forest landowner's alternate plan.

For the purposes of this manual, a strategy is a management practice that minimizes any potential negative impact to public resources. Each template consists of a number of strategies that applied in combination will meet required forest practices protections.

The templates and strategies for this manual section are developed in cooperation with representatives of the DNR Small Forest Landowners Office, Washington Farm Forestry Association, Washington Department of Fish and Wildlife, Washington Department of Ecology, Northwest Indian Fisheries Commission, NOAA Fisheries and U.S. Fish and Wildlife Service.

This manual contains templates designed to address common low impact situations that are repeatedly found in alternate plans or strategies. At present, the following template has been developed: **Template 1, Small Forest Landowner Western Washington Thinning Strategies for Overstocked Conifer- Dominated Riparian Management Zones.**

PART 2. ALTERNATE PLAN TEMPLATES FOR SMALL FOREST LANDOWNERS

Template 1. Small Forest Landowner Western Washington Thinning Strategies for Overstocked Conifer- Dominated Riparian Management Zones

BACKGROUND

This template applies to small forest landowners. A small forest landowner as defined in WAC 222-21-010(13) and RCW 76.13.120(2)(c), has harvested from their own lands in this state less than 2- million board feet per year for the three years prior to the year of application and who certifies at the time of application that they do not expect to harvest from their lands more than 2 million board feet per year during the ten years following application. With the adoption of the Forests and Fish Rules of 2001, riparian management zones (RMZ) on forested streams became much wider and required many more leave trees than previously required. Reforestation from previous forest management activities and, in some cases, natural stocking levels, has in some cases resulted in high tree densities of conifer species within riparian areas. These managed stands were densely planted with the intent to commercially thin, promoting growth of superior trees and generating income to the small forest landowner. Without thinning the canopies of these stands will begin to close, causing the trees to compete for resources, suppressing conifer understory regeneration, slowing the overall growth of the plantation and increasing tree mortality.

Through thinning, these stands can be managed in a manner that will establish a conifer species understory and achieve larger tree diameters of the residual stand faster than would have occurred under a no thinning option.

This template for thinning an overstocked conifer-dominated stand within the RMZ provides flexibility for small forest landowners to harvest while protecting riparian functions. The harvest strategies for this template includes a no harvest core zone and an inner zone harvest that meets or exceeds the stand requirements to achieve the goal in WAC 222-30-010(2) *to protect aquatic resources and related habitat to achieve restoration of riparian function; and the maintenance of these resources once they are restored*.

PROCESS

This template provides guidance for small forest landowners planning to thin overstocked conifer-dominated stands in western Washington. Adherence to all of the strategies within this template will meet the riparian function requirements for the approval of an Alternate Plan, WAC 222-12-0401 (6). A form, designed to be included with the forest practices application, is available through the DNR. This form provides the technical

justification, as required in WAC 222-12-0401(3)(b), identifying how the alternate plan addresses the various functional requirements of the riparian management zone.

Qualifying Stands

Qualifying stands must be at least 70% conifer, with a canopy that is closing, having a minimum of 300 trees per acre (TPA) at time of stand initiation, and located within a RMZ adjacent to a Type S or Type F water. Landowners planning to thin a qualifying stand within an RMZ protected by the Shorelines Management Act (RCW 76.09.910) must consult with the county of jurisdiction prior to submitting a thinning prescription under this template.

Riparian Management Zones

The RMZ is to be measured horizontally from the outer edge of bankfull width or the channel migration zone (CMZ), see Forest Practices Board Manual Section 2. Similar to the standard rules for western Washington riparian management zones for Type S and F waters, this template has three parts to the RMZ the Core, Inner and Outer zones. The widths of each of these riparian zones for this template are different than those described in the standard rules (WAC 222-30-021).

Harvest Prescriptions

Core zone

No timber harvest is allowed in the core zone. The width of the core zone is measured horizontally from the outer edge of bankfull width or the channel migration zone and is determined according to the following criteria:

- A distance equivalent to 1/2 the average crown diameter of the dominant conifer trees closest to the edge of the bankfull width or CMZ. To determine this distance, measure the crown diameters of a minimum of 10 dominant conifer trees within the riparian management zone.
- The core zone must encompass all conifer trees within the first row nearest the outer edge of bankfull width or the channel migration zone.
- The core zone must be no less than 14 feet from bankfull width or CMZ.
- Measured trees cannot be harvested, to allow for compliance and monitoring. Each tree must be marked and numbered.

Inner Zone

The inner zone is measured from the outer edge of the core zone. The combined distance of the core and inner zone, as measured from the edge of bankfull width (BFW) or channel migration zone (CMZ), can be no less than 75 feet. To determine the total widths of the core and inner zones use the table below.

Site Class	Combined Widths of Core and Inner Zones (Measured from the outer edge of bankfull width or channel migration zone)	
	Stream BFW width ≤ 10 feet	Stream BFW width > 10 feet
I	133 feet	150 feet
II	113 feet	128 feet
III	93 feet	105 feet
IV	75 feet	83 feet
V	75 feet	75 feet

The harvesting strategies for the inner zone are:

- All thinning will be from below, where at the conclusion of harvest the average stand diameter shall be the same or larger than the average stand diameter prior to harvest.
- If thinning to a residual stand that is below 180 trees per acre the Large Woody Debris Placement Strategy must be followed.
- Thinning cannot result in a residual stand with fewer than 100 well-distributed conifer trees per acre.
- An equipment limitation zone (ELZ) of 30 feet, as measured from the outer edge of bankfull width or channel migration zone (see Forest Practices Board Manual Section 2), shall be maintained during all harvest activities.
- Soil disturbance within the ELZ cannot result in sediment delivery to the stream.
- Within the ELZ, any trees harvested shall have one end of the log suspended during yarding. Directional falling away from the stream shall be used to minimize disturbance. Ground-based yarding systems must be limited to slopes of 35% or less in the inner zone.
- Any trees yarded through the inner zone using cable thinning on slopes greater than 35% must be fully suspended.

Outer Zone

Follow the standard forest practices rules in Outer Zone, per WAC 222-30-021(1)(c) or WAC 222-30-023.

LARGE WOODY DEBRIS PLACEMENT STRATEGY

Introduction

Ecological functions associated with large woody debris (LWD) are an integral part of productive in-stream habitat. Historic harvesting has reduced current sources of large woody debris in streams. While riparian forests mature, certain management techniques in these areas can enhance tree-growing conditions that help achieve the overall objective of providing larger diameter trees that contribute to long-term riparian and in-stream habitat function. However, if thinning results in a residual stand below 180 trees per acre, the addition of LWD into streams is required in most instances. LWD placement is intended to substitute for wood harvested under this template that otherwise had the

potential to recruit to the stream. This strategy is intended to provide woody debris to the stream in the short term (< 50 years) until the remaining unharvested trees within the RMZ are available to naturally recruit to the stream over the long term (> 50 years). The large woody debris placement strategy is intended to encourage instream pool formation for fish habitat. However, woody debris placement should not create barriers to fish migration.

Landowners are encouraged to consult with the DNR SFLO office for technical assistance with LWD placement or they may utilize a private consultant with expertise, to provide assistance in LWD placement.

Large Woody Debris Placement Target
The placement of large woody debris is limited to Type S or F Waters. Depending upon site conditions, this strategy may require the placement of up to 4 pieces of LWD per 300 lineal feet of stream (approximately 4 pieces per acre within the RMZ).

Landowners are encouraged to consult with the DNR SFLO office for technical assistance in identifying the preferred locations for LWD placement. Among those sites that are appropriate, different restrictions or levels of consultation may be necessary. Technical staff can determine if the size of a stream is too large for placed wood to remain on-site, help locate the most effective stream reaches for the placement of LWD, or determine if there is any need for additional LWD to be placed into the stream. At a minimum, the following locations should be avoided:

1. Channels that have a history of, and a near-future likelihood of debris torrents and other mass wasting activity.
2. Locations immediately above permanent culverts
3. Confined channels where the valley floor width is less than twice the bankfull width. See Section 2 for identifying Channel Migration Zones and bankfull channel features.

Large Woody Debris Guidelines
The small forest landowner shall follow these guidelines for large woody debris placement:

- The priority, from high to low, for LWD placement is:
    1. Root wads with tree boles attached.
    2. Tree boles with no root wad.
    3. Root wads without tree boles attached.
- Larger diameter wood is preferred over smaller diameter wood, however, LWD should be representative of the riparian stand.
- Landowners are encouraged to leave limbs and branches attached to logs that are placed.
- Trees may be felled directly into the stream.
- Trees may be bucked, and the bucked pieces may be placed in the stream.
- It is recommended that the boles of trees or rootwads be placed such that they are partially in the water and partially on the bank.

- Large woody debris should be placed so that part of the LWD is in the water at low summer stream flows as well as during high stream flows, to create pools and cover for fish.
- The wood should not be held in place by anchoring or cabling.
- No bank excavation should occur during wood placement.
- It is recommended that the placement of LWD occur when the local fish spawning populations are absent, this typically occurs during summer and fall low water flow periods.

Type of wood and wood quality. For this template, large woody debris is the available wood found on the property of a small forest landowner. The landowner may utilize any living or dead trees for LWD except those required to provide a live root mass to maintain bank stability. The first row of living trees adjacent to bankfull width or the channel migration zone of the stream cannot be used as LWD. Acceptable wood consists of:

- Conifer trees or logs, such as cedar, Douglas- fir or hemlock. These are the preferred species for placement because they will persist (i.e. decay slower) and will provide woody debris over a longer period of time. Hardwood or pine species should be avoided.
- Logs from trees felled at time of harvest or downed logs with a solid core. If logs are from an upland source, they must not compromise downed log requirements for wildlife (WAC 222-30-020(11)). Also, downed logs and standing snags already within the RMZ should be retained for wildlife habitat, floodplain function, and stand regeneration rather than relocated into the channel.
- Trees, including root wads, harvested during road construction are a good source of large woody debris.

Minimum wood length. The length of logs placed in the stream should be at least 2 times the bankfull width of the stream. If the log has a root wad attached, the log length should be no less than 1.5 times the bankfull width of the stream. The DNR SFLO office in consultation with Department of Fish and Wildlife (WDFW) or tribal professional staff shall determine if shorter wood lengths are acceptable.

Minimum wood diameter. The placement of large diameter woody debris is encouraged if it is available, however, LWD piece diameter should at least be representative of the adjacent riparian stand. At a minimum, a piece ofLWD, measured at the small end, shall be at least 4 inches in diameter.

This strategy does not require the placement of large dimensional wood into the stream, however, placement of large wood is encouraged if it is available. While it is recognized that most trees harvested under this template, will not be greater than 22 inches diameter breast height (dbh), the landowner may place large woody debris obtained from off site. The table below (from Forest Practices Board Manual Section 26) gives good guidance for optimal large woody debris piece size in different sized streams.

Stream Bank Full Width	Top Diameter of Logs
< 5 feet	12 inches
> 5 and < 16 feet	16 inches
> 16 and < 32 feet	22 inches
> 32 feet	26 inches

Restrictions to Riparian Zone Disturbances. Ground disturbance from machinery shall be minimized so that no sediment delivery to a stream will occur. Disturbed soils with the potential to erode into the stream shall be treated with erosion control measures available and appropriate for the site. Appropriate control measures may include water bars, grass seeding, mulching, hay bales or silt fences.

The Equipment Limitation Zone (ELZ) is 30 feet, measured horizontally, from the outer edge of the bankfull width or channel migration zone (see Forest Practices Board Manual Section 2). Equipment may operate within this zone, but soil disturbance within the ELZ from ground based equipment or cable logging systems should not result in sediment delivery to the stream. If large woody debris placement activities could expose more than 10% of the soil in the ELZ, there is potential for sediment delivery to the stream, and the landowner must consult with the DNR Forest Practices Forester prior to LWD placement.

Other Permits. A Hydraulic Project Approval (HPA) review is triggered when a forest practices application is submitted to the DNR with an attached Western Washington Overstocked Stand Template Addendum. An HPA is required for all woody debris placements and is issued by the Washington Department of Fish and Wildlife to regulate construction or other activities that "*use, divert, obstruct, or change the natural flow or bed of any ... waters of the state...*" (WAC 220-110).

SUMMARY

Applying this template will allow small forest landowners to submit an alternate plan for a western Washington overstocked conifer thinning prescription as part of a completed forest practices application (FPA). The FPA will be processed as an alternate plan as outlined in WAC 222-12-0401. A form, designed to be included with the forest practices application, is available through the DNR. This form provides the technical justification, as required in WAC 222-12-0401(3)(b), identifying how the alternate plan addresses the various functional requirements of the riparian management zone. An Interdisciplinary team (IDT) may be called to review the proposed harvest, however, by adhering to the guidelines in this template, the need for an IDT will be minimal and only necessary if specific issues arise.